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DOCUMENT RESUME

ED 032 599 CG 004 593

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Pre-School Kindergarten Readiness Inventory.

American Personnel and Guidance Association, Washington, D.C.
Pub Date Mar 69
Note-9p.; Paper presented at the American Personnel and Guidance Association Convention at Las Vegas, Nevada, March 30--April 3, 1969.
EDRS Price MF-$0.25 HC-$0.55
Descriptors-*Diagnostic Tests, *Identification Tests, *Kindergarten, *Learning Readiness, Measurement Instruments, Readiness, Reading Readiness Tests, Reading Skills, *Test Construction, Testing, Test Reliability, Test Validity
Identifiers-Pre-School Kindergarten Readiness Inventory (PKRI)

The Pre-School Kindergarten Readiness Inventory (PKRI) is a brief diagnostic instrument designed to be administered by the classroom teacher. It can be administered and scored in 10 to 12 minutes. The PKRI was developed to measure abilities and skills that are regarded as necessary for success in school. These include social awareness, motor performance, and letter recognition. The most important goal was to help the teacher to become "tuned in" emotionally with the child. The results may be used to identify children who appear to need: (1) vocabulary development, (2) further diagnostic work, and (3) more work in perceptual activities. The construction of the PKRI involved item analysis based on 1,926 kindergarten pupils. The PKRI was administered for standardization purposes to approximately 2,000 children in May, 1969. More research on the PKRI measure in relation to reading success should be carried out. (Author/KJ)

ED032599

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# PRE-SCHOOL KINDERGARTEN READINESS INVENTORY

Margaret E. Green

The Pre-School Kindergarten Readiness Inventory (PKRI)* is a brief diagnostic instrument designed to be administered by the classroom teacher. It can be administered and scored in ten to twelve minutes. It takes only a few minutes to master the directions for administering, and the materials needed are readily available in the classroom. The PKRI was developed to measure abilities and skills that are regarded as necessary for success in school, for example, social awareness, numerical awareness, motor performance, direction awareness, letter recognition, and body image awareness. Perhaps the most important goal was to give the classroom teacher the opportunity to become "tuned-in" emotionally with the child.

The author recognizing the need for identification of characteristics that contribute to success in school has benefitted from research of recent findings of school psychologists, evaluation studies of preschool programs, and earlier editions of Readiness Tests. In addition, the professional observations of preschool, kindergarten, and first grade teachers were helpful, coupled with the author's experience of administering individual tests to 1200 children from three to six years of age.

## USE OF RESULTS

The kindergarten teacher, counselor, and guidance personnel will use the information in different ways depending upon the time of the year that the PKRI is given. The results of the Inventory that is given during the

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* A paper presented at the American Personnel and Guidance Association Convention, 1969.

first two weeks of September may be used, for example:

-- to identify children who appear to need vocabulary developing activities,

-- to assess the needs of children who appear to need further diagnosis by the speech and hearing specialists, individual testing by the school psychologist, or examination by the school nurse,

-- to identify children of high or low general maturity and who are relatively weak or outstanding in visual motor perception, vocabulary development, numerical concepts, and social awareness,

-- to counsel with parents concerning abilities and limitation of the child,

-- to study the emotional characteristics of the individual child in relation to success or failure to complete tasks or give information,

-- to determine the ability of children in regard to speech patterns (ability to speak in complete sentences),

-- to go beyond the scope of paper and pencil testing to include social and emotional attributes that must be recognized as important characteristics to the child's success or lack of success in the very first school experience,

-- to get acquainted intimately with the child in a way that can only be done quickly by an individual personal interview.

The results of the PKRI will serve different purposes when it is given again to the same children in the spring of the kindergarten year, for example:

-- to obtain a quick indication of the growth in maturation and skills needed to successfully do first grade work,

-- to identify specific areas that are weak or strong, and determine in which areas progress has been shown,

-- to diagnose the abilities and limitations of individual children,

-- to use as a basis for initial grouping in the first grade for instructional purposes,

-- to assess the range of readiness to assist in determining the first grade curriculum and materials needed for instruction,

-- to try to determine the reasons for a child's lack of progress,

-- to provide pupils with low readiness status a background for learning that will enhance his chances for success in the first grade; such as: drawing and painting, building activities, playing games, visual motor development and language activities.

## CONSTRUCTION AND STANDARDIZATION

The item analysis was based on 1926 kindergarten pupils who participated in the fall of 1968. For all items the percent of pupils answering correctly was determined and an index of item discriminating capacity was constructed--based on difference in per cent passing between the high-scoring and the low-scoring 27 per cent. Items on the first test were chosen based on these data.

The PKRI was administered for standardization purposes in May, 1969 to approximately 2000 students in 23 schools. The Chula Vista City School District is an elementary district with an enrollment of more than 14,000 pupils in K-6. The district operates a preschool program. Racial and ethnic distribution of the population is approximately 20% Spanish surnames, 75% other white, 2% Oriental, 1% Negro, 2% other Non-white. There are four schools participating in an ESEA Title I program. Chula Vista is a suburban community with one main industry, with about 25% of the student population

from military service connected homes. The district mean I.Q. score is approximately 100 based on the Lorge Thorndike Intelligence Tests.

1900 children from the above group were given both the Metropolitan Readiness Test and the Pre-School Kindergarten Readiness Inventory in May, 1969. One hundred cases were selected at random out of a population of 1900. An array of scores of the Metropolitan Readiness Test and the Pre-School Kindergarten Readiness Inventory was listed for each of the 100 random cases. The total score on the PKRI correlates very highly (.83)* with the total score on the Metropolitan Readiness Test, indicating that the two instruments yield results in close agreement as to the readiness to read of the kindergarten children.

At the time of preparation of this paper the only study made as to the predictability of reading success by the PKRI is a pilot study that was done with 95 students from four schools in May, 1968 at which time the PKRI was administered. This group must be considered atypical due to the fact that many of the children attend a Title I school (ESEA), more than fifty per cent have Spanish surnames and scored in the lower quartile of test scores. A follow-up study was made of this same group in March, 1969, when these children were in the latter half of first grade. Of the ninety-five, 88 pupils were still in attendance in the district. The first grade teacher of each child was interviewed, at which time the teacher rated the children as high, medium or low in terms of reading ability. 85% of the children who scored in the upper quarter of the PKRI test were rated by the teacher to be in the upper and middle reading groups. 67% of the children who tested in

*High significance was accepted at the .01 level of chance.

the bottom quarter percentile of the PKRI were rated in the low reading group. These data are presented in Table I.

TABLE I

READING ACHIEVEMENT BY TEACHER JUDGMENT

| PKRI SCORE | % in High Rdg. Gr. | % in Middle Rdg. Gr. | % in Low Rdg. Gr. |
|---|---|---|---|
| 54 - 65 | 59 | 27 | 14 |
| 43 - 53 | 25 | 58 | 17 |
| 33 - 42 | 19 | 33 | 48 |
| 0 - 32 | 14 | 19 | 67 |

Data collected on the 88 pupils were: (1) total Pre-School Kindergarten Readiness Inventory scores, (2) the six sub-area scores, (3) total Metropolitan Readiness Test scores, (4) total Stanford Achievement Test reading scores, and (5) sub-scores of the Stanford Achievement Test in vocabulary, word meaning, and paragraph meaning.

Information contained in the PKRI and achievement test scores was processed by a computer, using the Correlation with Transgeneration program number MBO2D, developed by the computing facility at the University of California, Los Angeles campus, and revised December, 1969.

The analysis of the data attempted to determine which variables of the PKRI were best related to total reading achievement as determined by the Stanford Achievement Test. This can be seen by Table III. Table II will identify the variables, Table III the correlation of single variables. The internal consistency of the PKRI, as judged by correlations of sub-areas to total score, showed the most reliable to be Letter Recognition at .88. Social Awareness at .83 was second, and Motor Performance at .82 was third.

In conclusion, it appears that more research on the PKRI measure in relation to reading success should be carried out. A follow-up on reading scores of this year's 2000 kindergarten children is in progress at the present time. This population is a more representative group than the population in the pilot study.

TABLE II

IDENTIFICATION OF VARIABLES

| Column | Pre-School Kindergarten Readiness Inventory | Stanford Achievement Test |
|---|---|---|
| 1 | Social Awareness | |
| 2 | Numerical Awareness | |
| 3 | Motor Performance | |
| 4 | Direction Awareness | |
| 5 | Letter Recognition | |
| 6 | Body Image Awareness | |
| 7 | Total PKRI Score | |
| 8 | | Word Meaning |
| 9 | | Paragraph Meaning |
| 10 | | Vocabulary |
| 11 | | Total Reading Score |

TABLE III

CORRELATION OF SINGLE VARIABLES

| Row | Col. 1 | Col. 2 | Col. 3 | Col. 4 | Col. 5 | Col. 6 |
|---|---|---|---|---|---|---|
| 1 | 1.0000 | 0.5544 | 0.5236 | 0.1528 | 0.7011 | 0.3404 |
| 2 | 0.5544 | 1.000 | 0.5246 | 0.0500 | 0.4378 | 0.3437 |
| 3 | 0.5236 | 0.5246 | 1.0000 | 0.1956 | 0.6819 | 0.4635 |
| 4. | 0.1528 | 0.0500 | 0.1956 | 1.0000 | 0.0279 | -0.0082 |
| 5 | 0.7011 | 0.4378 | 0.6819 | 0.0279 | 1.0000 | 0.4374 |
| 6 | 0.3404 | 0.3437 | 0.4635 | -0.0082 | 0.4374 | 1.0000 |
| 7 | 0.8262 | 0.6969 | 0.8166 | 0.2829 | 0.8766 | 0.5177 |
| 8 | 0.5767 | 0.3693 | 0.3222 | 0.0550 | 0.5197 | 0.2988 |
| 9 | 0.4397 | 0.3274 | 0.2816 | 0.0057 | 0.3903 | 0.3051 |
| 10 | 0.5239 | 0.4315 | 0.4424 | -0.1360 | 0.6317 | 0.3225 |
| 11 | 0.5153 | 0.3592 | 0.2955 | 0.0384 | 0.4560 | 0.3368 |

| Row | Col. 7 | Col. 8 | Col. 9 | Col. 10 | Col. 11 |
|---|---|---|---|---|---|
| 1 | 0.8262 | 0.5767 | 0.4397 | 0.5239 | 0.5153 |
| 2 | 0.6969 | 0.3693 | 0.3274 | 0.4315 | 0.3592 |
| 3 | 0.8166 | 0.3222 | 0.2816 | 0.4424 | 0.2955 |
| 4 | 0.2829 | 0.0550 | 0.0057 | 0.1360 | 0.0384 |
| 5 | 0.8766 | 0.5197 | 0.3903 | 0.6317 | 0.4560 |
| 6 | 0.5177 | 0.2988 | 0.3051 | 0.3225 | 0.3368 |
| 7 | 1.0000 | 0.5418 | 0.4212 | 0.5874 | 0.4888 |
| 8 | 0.5418 | 1.0000 | 0.8250 | 0.6216 | 0.9259 |
| 9 | 0.4212 | 0.8250 | 1.0000 | 0.5289 | 0.9598 |
| 10 | 0.5874 | 0.6216 | 0.5289 | 1.0000 | 0.5644 |
| 11 | 0.4888 | 0.9259 | 0.9598 | 0.5644 | 1.0000 |

# PRE-SCHOOL KINDERGARTEN READINESS INVENTORY

## Class Record

District _____ School _____ Teacher _____ Grade _____ Date _____

| Name | CA | Total Score | | FOR OFFICE USE ONLY | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | SA* | | | | | NA* | | | MP* | | | DA* | | LR* | | BIA* | |
| | | Raw | Sta | 1 | 2 | 3 | 4 | 7 | 5 | 6 | 9 | 8 | 13 | 14 | 12 | 15 | 10 | 11 | 16 | |
| 1. | | | | | | | | | | | | | | | | | | | | |
| 2. | | | | | | | | | | | | | | | | | | | | |
| 3. | | | | | | | | | | | | | | | | | | | | |
| 4. | | | | | | | | | | | | | | | | | | | | |
| 5. | | | | | | | | | | | | | | | | | | | | |
| 6. | | | | | | | | | | | | | | | | | | | | |
| 7. | | | | | | | | | | | | | | | | | | | | |
| 8. | | | | | | | | | | | | | | | | | | | | |
| 9. | | | | | | | | | | | | | | | | | | | | |
| 10. | | | | | | | | | | | | | | | | | | | | |
| 11. | | | | | | | | | | | | | | | | | | | | |
| 12. | | | | | | | | | | | | | | | | | | | | |
| 13. | | | | | | | | | | | | | | | | | | | | |
| 14. | | | | | | | | | | | | | | | | | | | | |
| 15. | | | | | | | | | | | | | | | | | | | | |
| 16. | | | | | | | | | | | | | | | | | | | | |
| 17. | | | | | | | | | | | | | | | | | | | | |
| 18. | | | | | | | | | | | | | | | | | | | | |
| 19. | | | | | | | | | | | | | | | | | | | | |
| 20. | | | | | | | | | | | | | | | | | | | | |
| 21. | | | | | | | | | | | | | | | | | | | | |
| 22. | | | | | | | | | | | | | | | | | | | | |
| 23. | | | | | | | | | | | | | | | | | | | | |
| 24. | | | | | | | | | | | | | | | | | | | | |
| 25. | | | | | | | | | | | | | | | | | | | | |
| 26. | | | | | | | | | | | | | | | | | | | | |
| 27. | | | | | | | | | | | | | | | | | | | | |
| 28. | | | | | | | | | | | | | | | | | | | | |
| 29. | | | | | | | | | | | | | | | | | | | | |
| 30. | | | | | | | | | | | | | | | | | | | | |
| 31. | | | | | | | | | | | | | | | | | | | | |
| 32. | | | | | | | | | | | | | | | | | | | | |

* SA: Social Awareness MP: Motor Performance LR: Letter Recognition
NA: Numerical Awareness DA: Direction Awareness BIA: Body Image Awareness

CVCSD/A170(17)/8-69

## PRE-SCHOOL KINDERGARTEN READINESS INVENTORY
## SCORING AND INTERPRETATION

The total score may be converted to stanines found in Table I. The stanines are based on performance of pupils assessed during the first two or three weeks of kindergarten.

TABLE I
(Fall assessment)

| Total Score | Stanine |
|---|---|
| 59-65 | 9 |
| 53-58 | 8 |
| 47-52 | 7 |
| 41-46 | 6 |
| 34-40 | 5 |
| 28-33 | 4 |
| 22-27 | 3 |
| 16-21 | 2 |
| 0-15 | 1 |

The information contained in Table II includes the quartiles for boys and girls.

TABLE II

| | Girls | | Boys | | Total | |
|---|---|---|---|---|---|---|
| | Score | Stanine | Score | Stanine | Score | Stanine |
| $Q_3$ | 45 | 6 | 43 | 6 | 44 | 6 |
| Md. | 37 | 5 | 34 | 5 | 36 | 5 |
| $Q_1$ | 29 | 4 | 26 | 3 | 28 | 4 |
| N = | 940 | | 986 | | 1926 | |

The total score may also be interpreted by the following verbal description of the significance of the score as found in Table III.

TABLE III

| Score Range | Stanine | Readiness Status |
|---|---|---|
| 53-65 | 8-9 | Should be given enriched work in line with indicated high ability. |
| 41-52 | 6-7 | Appears to have good prospects for success in the kindergarten program. |
| 28-40 | 4-5 | Specific strengths and limitations should be studied to plan instruction, average progress probable. |
| 16-27 | 2-3 | Appears to need much individualized help based on careful study of needs. |
| 0-15 | 1 | Individualized work is essential, chances for difficulty high under usual class instruction; referral for further diagnosis is suggested, since specialized assistance may be needed. |